**Choi, J. & Dulisse, B. (2020). The importation of violent "codes" of South Korean inmates.** ***The Prison Journal, 100*****(3). https://doi.org/10.1177/0032885520916816**


# The Importation of Violent "Codes" of South Korean Inmates

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Abstract

Despite the popularity of the importation model, the majority of previous institutional misconduct research has used individual characteristics, such as race, prior record, education, and sex as proxies to test this theory. The current study examines particular oppositional beliefs and values found in Anderson's (1994) "code of the street" through an analysis of self-report data from 951 adult male prison inmates in South Korea. The current study fills a void in previous research by examining direct impacts of imported belief systems on inmate interpersonal aggression toward fellow inmates and correctional officers.

*Keywords:* code of the street, importation model, interpersonal aggression, inmate violence

**The Importation of Violent "Codes" of South Korean Inmates**

Criminologists have long argued whether negative experiences and behavior in the prison setting is caused by imported belief systems or the deprivation of natural freedoms. Deprivation theorists contend that the causes for inmate behavior are primarily due to loss of autonomy, unpredictability, and other pains and adversities of imprisonment (e.g., Sykes, 1958). In stark contrast, importation theorists suggest inmate behavior is largely an extension of developed attitudes, values, beliefs, and behaviors developed in the community that are imported when an inmate enters the prison context (e.g., Irwin & Cressey, 1962). Empirical support has occasionally been found for both the deprivation (see Moos, 1976) and importation (see Schwartz, 1971) hypotheses, but it remains a matter of debate as to the true source of influence on inmate behavior.

This study seeks to understand the influence of violent subcultures imported inside the prison. We believe the importation model provides the most-sound theoretical model for our study and will be examined hereafter as a possible explanation of inmate violence for a couple reasons. First, violent subcultures shaped outside of the prison maintain many similarities with inmate value systems inside the prison (Mitchell, Fahmy, Pyrooz, & Decker, 2017). Since many prisoners began as adherers of violent subcultures outside of prison, the importation of these beliefs remains a plausible hypothesis. Second, a majority of institutional misconduct research has historically focused on individual characteristics, such as race, prior record, education, and sex to test this theory (Steiner, Butler, & Ellison, 2014; Tasca, Leiber, Griffin, & Rodriguez, 2010). Given that cultural belief systems may not be directly translated into the social and demographic characteristics of inmates, these proxy measures are necessary but not sufficient in

demonstrating a direct effect of an imported belief system. Even fewer attempts have been made to understand which specific beliefs and values may be imported into these incarcerative settings.

## Literature Review

### The Importation Model

An extensive body of literature has investigated the various factors that influence inmates' behaviors within the correctional setting (Liebling & Arnold, 2004; Sparks, Bottoms, & Hay, 1996). One major paradigm, the importation model, has long prevailed (Irwin & Cressey, 1962). Previous empirical analysis has primarily focused on individual characteristics such as marital status, age and educational attainment as predictors of inmate behavior (Cao, Zhao, & Van Dine, 1997; Reisig & Lee, 2000; Steiner & Wooldredge, 2008).

Despite the prevalence of evidence supporting an importation paradigm, the majority of importation research has been limited to using proxy measures to capture the relationship between previous background characteristics and values with current ones. Given that the importation model supports the assumption that an association exists between an individual's cultural belief systems before incarceration and current inmate behavior, little effort has been made to answer this proposition directly (Mears, Stewart, Siennick, & Simons, 2013; Steiner et al., 2014). Put simply, direct measures that represent inmates' internal beliefs and values are necessary when testing the effect of imported cultural belief systems on inmate behavior. To the best of our knowledge, only two available studies specifically address this issue (Lahm, 2008; Mears et al., 2013).

In a multi-level analysis, Lahm (2008) developed measures designed to tap into an inmate's beliefs before entry into prison. Modifying the National Youth Survey, the author used ten items measuring how one felt about deviant behaviors before incarceration. Findings from this study did not confirm a statistically significant relationship between these measures and inmate violence with the author suggesting that relying on the retrospective memory of inmates may not be the most successful method in measuring inmates' imported belief systems. In fact, Lahm (2008) further elaborated that "[a] true test of the power of this beliefs variable would include measures of criminal values […] during incarceration" (p. 134).

Taking up the issue of proxy measures for imported belief systems, Mears et al. (2013) used longitudinal data from 219 individuals from the Family and Community Health Study (FACHS) in an attempt to examine whether any imported beliefs held before incarceration possessed any influence on violence during incarceration. The authors found that respondents' previous belief systems were positively associated with the likelihood of violence once incarcerated, even while controlling for prior record, neighborhood, and individual characteristics. One of the major contributions of this study stems from the specification of which belief systems are imported. Mears et al. (2013) argued that Anderson's (1999) concept of the "code of the street" as an oppositional belief system outside of prison maintains a significant correlation and overlap with the beliefs and behaviors displayed among many violent inmates in prison.

Although Mears et al.'s (2013) study offers a significant first-step, several limiting features of their data and analysis exist. First, while their use of longitudinal data (particularly wave four and six) were beneficial in demonstrating a time order consistent

with the proposed thesis from Anderson, it did not directly address whether offenders retained the code of the street while they were incarcerated. Second, some subjects who participated in the early waves of the survey were excluded from the final analysis. For example, at wave six, only inmates who had completed their sentences were surveyed; this may have skewed the final results as those facing longer sentences might be incarcerated longer due to their stronger belief in retaliatory and violent belief systems. Third, many controls derived from major criminological theories (e.g., low self-control and victimization experience during imprisonment) were omitted in the analysis, which may have caused an overestimation of the effect of a cultural belief system.

**Code of the Street**

According to Anderson (1999), the "street code" acts as an informal set of beliefs and values learned in youth to govern how individuals, particularly young African American males, behave. This belief system channels individuals to respond to minor instances of disrespect with violence or aggression, placing an excessive emphasis on gaining respect through tough demeanor, willingness to use violence, and lack of cooperation with law enforcement among others.

For over half a century, social scientists have acknowledged the obvious parallel between violent street and prison culture in the United States. In particular, importation theorists have suggested this is the result of specific beliefs and values taken from the street context and imported into the prison (e.g., Irwin & Cressey, 1962). As a result, this "convict code" (Irwin & Cressey, 1962; Mitchell et al., 2017) may mirror the code of the street by acting as an informal guide; lowering the chance of victimization while assisting prisoners in navigating incarcerated life. As a series of informal rules, norms, and values,

the convict code runs counter to conventional society and is rooted in many of the same traditions as the street code.

Another contextual similarity exists in how value status and reputation are over-emphasized in both settings compared to conventional society. Similar to the code of the street, the "convict code" also emphasizes a status hierarchy based on power and prestige which is not minimized when entering an incarcerative setting (Copes, Brookman, & Brown, 2013). One example is the excess of retaliatory violence seen in both contexts. Retaliating is frequently used to protect against future victimization (Berg, Stewart, Schreck, & Simons, 2012) and to maintain a reputation of toughness (Brunson & Stewart, 2006). In the street, the extent to which one person can gain respect is equal to the amount they can take from another (Anderson, 1994). This exchange of respect is achieved through violence, leading many to feel vulnerable and desirous of any strategy to compensate for their lack of security and constant threat of victimization. This process has also been evidenced in the convict code. For example, a qualitative study recently recorded that 73% of those interviewed used retaliation (i.e., physical aggression) as the most common coping strategy while in prison (Leban, Cardwell, Copes, & Brezina, 2015). While more evidence is needed to establish a link between a prison and convict code, a growing body of evidence reveals a strong overlap between the two concepts.

The code of the street as a theoretical framework has been used in explaining violence in a variety of settings with many different victims and offenders (Henson, Swartz, & Reyns, 2017; Mears, Stewart, Warren, & Simons, 2017; Swartz, Wilcox, & Ousey, 2017). For example, in a school setting of 3,976 high school students within 115 unique school contexts, Swartz et al. (2017) found that code of the street-like values

exhibited within the school significantly influenced violence during and after school hours. This same pattern has also been linked to code of the street-like values in Internet forums with cybercrimes (Henson et al., 2017) furthering evidence that oppositional value systems like the code of the street may operate in unique settings outside of the traditionally disadvantaged neighborhoods referenced by Anderson (1999) in his original theory.

Some beliefs promoted in the code of the street may increase the probability of other negative social outcomes besides an increased risk of victimization. For example, a willingness to use violence may create a demeanor observed through interactions with law enforcement as police, courtroom actors, and correctional officers to be hostile and worthy of increased force or other formal responses. Reliance of any kind on law enforcement is considered a serious violation of the code and can suggest cowardice and/or a compromise of the code's values (Anderson, 1999). Additionally, a plethora of research exists supporting the assertion that formal responses such as arrest are more common when citizens maintain a hostile, uncooperative, or disrespectful discourse with law enforcement (Engel, Sobol, & Worden, 2000; Piliavin & Briar, 1964) or formal sanctions during court processing (Beaver, DeLisi, Mears, & Stewart, 2009; Ulmer, 2012). Ultimately, an aggressive demeanor reinforced by criminal codes (while advantageous for interactions with other code-supporters) will likely increase the probability of interpersonal aggression when interacting with law enforcement officers, including correctional officers (Mears et al., 2017).

**Other Relevant Factors Related to Prison Misconduct**

The association between low self-esteem and aggressive or violent behavior has been a major issue of debate among researchers in recent years (Baumeister, Campbell, Krueger, & Vohs, 2003; Baumeister, Smart, & Boden, 1996; Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005). This debate centers on whether or not individuals with low self-esteem are prone to delinquency (e.g., Fergusson & Horwood, 2002), not prone to delinquency (Bynner, O'Malley, & Bachman, 1981) or that mismeasurement of low self-esteem is actually masking a link between high self-esteem and delinquency (Baumeister et al., 1996).

In addition to self-esteem, the presence of social support mechanisms within the prison may also affect inmate behavior. Institutional programming such as vocational and educational programs are designed to enhance inmate's prospects for careers once they are released while simultaneously reducing the risk for future recidivism. Generally, prison-based programming can reduce idle time, improve self-esteem (Jiang & Winfree, 2006), provide safe spaces, and improve the quality of day-to-day life (Forst, Fagan, & Vivona, 1989). Pertinent to this study however, research has indicated that prosocial support gained from certain prison-based educational programming can actually lead to fewer rule violations (Gaes & McGuire, 1985; McCorkle, Miethe, & Drass, 1995).

Not all effective social support mechanisms for prisoners must originate in the institutional setting however. Those that originate outside of the prison—support from family or friends—may improve a myriad of negative influences leading to a reduction in official rule violations in prison (Toch, Adams, & Grant, 1989). Additionally, social support within the prison context may also strengthen inmate's ties to family (Howser, Grossman, & Macdonald, 1984); which have been shown to promote prosocial behavior

in general (Wright, Cullen, & Miller, 2001). Scholars have long concluded the prosocial benefits of institutional and informal social support for inmates. If social support programs and opportunities are present in an incarcerative setting, they should theoretically work in the opposite direction of antisocial code-like value systems on inmate misconduct.

**Current Study**

The key hypothesis is created based on the existing literature. Our hypothesis argues that surveyed inmates' level of adherence to the code of the street will influence inmate misconduct within the prison. In other words, inmates who exhibit a strong internalization of the street code will be more likely to engage in interpersonal aggression. This consideration of an imported belief system is particularly important within an incarcerated setting because inmates are often put in situations where they are required to interact with fellow inmates regardless of preference (Sparks & Bottoms, 1995). In addition, since inmates in general tend to possess a lower level of self-control than the general population, they are more likely to be involved in altercations and violence especially with respect to the frequency of these interactions (DeLisi, Trulson, Marquart, Drury, & Kosloski, 2011). Accordingly, internalization of any belief system that prioritizes reputation and retaliation increases the probability of interpersonal aggression by inmates who strongly subscribe to these beliefs.

The unique factors that influence targeted aggression toward specific targets is one area of study often overlooked when explaining the effect of culture on violence (Lahm, 2009). More specifically, imported belief systems may function differently depending on the risk and reward for aggression and behavior toward certain populations.

Within the prison context, inmates may be more likely to solve issues based on an informal code with other inmates who abide by the same code, but not adopt the same responses for those who do not abide by the same set of rules (e.g., correctional officers, nursing staff). In contrast, it is also possible that inmates with stronger adherence to a street code express more interpersonal aggression regardless of the individual they are interacting with. This current study is designed to observe whether or not differences exist in the application of aggression depending on the target population (inmate vs. staff) for adherents of an oppositional belief system. A full model of interpersonal aggression toward fellow inmates and correctional officers will be demonstrated to understand the role of incarceration experiences in inmate adjustment better.

## Methods

### Sample

The findings of this study are based on secondary analysis of data collected from 986 male inmates from 20 Korean correctional facilities in 2009 (for more on this data see Yoon, 2009). This project was approved by the institutional review boards of the Korea Correctional Service (KCS) and Kyonngi University. This purposive sample involved a two-stage process. For the first stage, three characteristics of the prison were considered to choose correctional facilities: regional distribution of prison in South Korea, prison type, and prisoner capacity. Based on these criteria, thirteen prisons that held more than 1,000 inmates and seven prisons that held less than 1,000 inmates were chosen. For the second stage, different numbers of inmates were randomly selected from each institution while considering prisoner capacity. From the facilities with higher prisoner capacity (more than 1,000 inmates), 60 adult male inmates were drawn, while 40

adult male inmates were drawn from the facilities with lower prisoner capacity (less than 1,000 inmates). While 1,060 inmates were requested to participate in the survey, only 986 inmates agreed to take the survey. Among the 986 inmates, 35 cases were dropped because of extensive missing data (> 20%). Additionally, the 305 inmates also had some missing data (< 20%), but the number of missing values was not extensive. Excluding demographic variables, these missing values were replaced using multiple imputations by chained equations with the *mice* package in R. This process left our final analytical sample with 951 total inmates.

**Measures**

**Dependent variable.** Two dependent variables were used in the current study. The first represents inmate aggression toward fellow inmates, while the second reflects inmate aggression toward correctional officers (see Piquero & Sealock, 2000; Reisig & Meško, 2009). To create an index of *interpersonal aggression toward fellow inmates*, we combined three items: "insult at inmate(s) within the last year," "fight against a fellow inmate(s) within the last year," and "assaults against a fellow inmate(s) within the last year." The new scale's Cronbach's alpha was .76, which is above the minimally acceptable level of reliability (Spector, 1992). Our second scale, *interpersonal aggression toward a correctional officer*, was measured by combining two items tapping the extent of physical and verbal aggression toward correctional officers: "insult at the officer(s) within the last year," and "assault against the correctional officer(s) within the last year." Reliability test results showed a relatively low Cronbach's alpha score (= .57). This score is sensitive to the number of items in the scale. Scales with less than ten items are prone to show low alpha scores. Briggs and Cheek (1986) suggested that if the mean inter-item

correlation for the items is above .2, then this scale can be regarded as reliable. The mean inter-item correlation of *interpersonal aggression toward correctional officer* showed .51; thus, the current study reliably employed this scale.

For these measures, item responses were 0 (never), 1 (1 or 2 times), 2 (3 or 5 times), 3 (6 or 9 times), and 4 (10 or more times). Higher scores reflect higher levels of interpersonal aggression. Since inmates overall reported a higher level of compliance with the administrative regulations, their responses were positively skewed. To improve the distribution of interpersonal aggression indexes, a constant (+ 1) was added to the weighted factor score of each index. Scores were then transformed by taking the natural log (Reisig & Meško, 2009). These steps resulted in normalization of the distribution. The measure for interpersonal aggression toward fellow inmates ranged between –1.14 and 2.05 ($M$ = –0.36, $SD$ = 0.81), while the range for interpersonal aggression toward correctional officers ranged between –0.24 and 2.83 ($M$ = –0.13, $SD$ = 0.39) (see Table 1).

**Independent Variable.** In the current study, the key independent variable is a measure of imported belief systems that closely mirror the items used by Mears et al. (2013) to create their "code of the street" measurement. While Anderson's (1999) theory centers on cultural adaptations of African American adolescents within disadvantaged neighborhoods, Brezina, Agnew, Cullen, and Wright (2004) revealed that being a black is not a requirement for the adoption of code-like belief systems. This statement also coincided with recent studies expanding the utility of the theory in other settings than inner-city neighborhoods (Henson et al., 2017; Mears et al., 2017). For these reasons, we

believe measures of a "code of the street" similar to those used by Mears and colleagues (2013) are sufficient for analysis in a sample of South Korean inmates.

The street code belief index in the current study is a unique measure that bears further explanation. Previous studies examining code-like behavior in prison have primarily focused on the distinctive subculture of prison life commonly referred to as "convict codes" (Copes et al., 2013; Mitchell et al., 2017). However, we postulate that conceptualizing a violent subculture within the prison setting as a convict code should be reconsidered, especially given that a growing body of research illuminates the similarities between the convict code and street code while raising the question as to whether violent culture is a unique byproduct of prison life (Irwin & Cressey, 1962; Mitchell et al., 2017).

Based on the preceding observations, the imported belief system scale in this study was created by summarizing four survey responses: "To survive here, I should not look weak and naive to fellow inmates," "In this place, inmates with power pick on inmates without power," "In this place, our ranks are made depending on how much power or money we have," and "In this place, the more one has prior records, the more one gets respect from fellow inmates." These items are comparable to the items that have been used in the previous studies which were designed to highlight the importance of power and respect during interactions in disadvantaged neighborhoods (Berg et al., 2012; Stewart & Simons, 2006) and previous studies examining the same phenomenon (Mears et a., 2013). The response options for the items ($\alpha = .76$) ranged from 1 (*strongly disagree*) to 4 (*strongly agree*).

**Inmate Characteristics.** For multivariate analysis, several individual characteristics of prisoners were used as control variables: age, education, marital status,

low self-control, and self-esteem. All subjects were male and varied in age ($M$ = 39.07). Education level was measured by five choices ranging from an elementary school education up to and including attendance in graduate school. Inmates were also asked about their marital status with married being the control group (single = 1). Inmates' self-reported internal characteristics were also included in the model. A low self-control scale ($\alpha$ = .84) was created by summing six items adapted from Grasmick, Tittle, Bursik, and Arneklev's (1993) scale with the following items: "I prefer to do things physical rather than verbal," "When I encounter some difficult or complicated tasks, I usually give up," "I lose my temper easily," "I sometimes like to do things that are a little exciting," "I often enjoy teasing others," and "I do whatever brings me pleasure here and now." While Baron's (2009) factor analysis suggested that the items for low self-control loaded on two different factors, the results from a principal axis factoring analysis using a direct oblimin method indicated an emergence of one factor that had an eigenvalue of 1.00 or higher. The scale was coded so that a higher score indicated a lower level of self-control.

According to Agnew (2007), the likelihood of criminal coping can differ depending on whether an individual possesses internal coping mechanisms, such as self-esteem, that help individuals to handle stressful situations non-criminally. Interestingly, some research has indicated that violence (or aggressive attitudes) may result from high self-esteem. According to Baumeister et al. (1996), violence appears to be more commonly associated with high self-esteem and 'threatened egotism,' which can be defined as "highly favorable views of self that are disputed by some person or circumstance" (p. 5). Recognizing the mixed findings of researchers, the self-esteem scale was measured by five items: "similar to other people, I am a person of worth as

well," "I am aware of my good qualities," "similar to other people, I can do work as well," "I like myself," and "I am satisfied with myself" (1= strongly disagree, 4 = strongly agree) ($\alpha = .84$).

**Offense History.** The study includes three criminal justice controls: length of time served (logged), convicted of the violent offense (violent offense = 1), and the number of times admitted to prison ($M = 1.65$). Variables related to criminal history have often been used by importation theorists when predicting future behavior in prison (Cao et al., 1997; DeLisi, Berg, & Hochstetler, 2004; Tasca et al., 2010). For example, inmates convicted of more violent offenses are often predicted to engage in violent activities within a prison based on their risk level determined by previous offense history rather than their ability to adjust to unfamiliar prison conditions (Irwin & Cressey, 1962).

**Prison Experiences.** The current study measured seven variables to capture unique incarceration experiences: experienced violent victimization, supportive friends, and family, supportive fellow inmates, academic education, vocational training, psychological treatment, and work in prison. Each measure is theoretically relevant to our hypotheses and may have a substantial impact on inmate behavior in prison. For instance, research has suggested that experiencing violent victimization in prison may induce inmates' interpersonal aggression to retaliate or prevent further victimization (Agnew, 1992; Anderson, 1999; Blevins, Listwan, Cullen, & Jonson, 2010). McGrath, Marcum, and Copes (2012) examined whether experienced victimization associated with inmates' engagement in violence and substance abuse based on Agnew's (1992) general strain theory. The authors found that experienced victimization (i.e., strain) was associated with higher levels of violent behavior and drug/alcohol use by inmates. The experienced

violent victimization scale in this study consists of five items asking about their violent victimization experiences: "had been verbally abused during the last twelve months," "had been hit by fist or foot during the last twelve months," "had been immersed in water during the last twelve months," "had been hit by garbage during the last twelve months," and "had been hurt by weapon during the last twelve months." The response options for each item were 0 (never), 1 (1 or 2 times), 2 (3 or 5 times), 3 (6 or 9 times), and 4 (10 or more times). The five items were factored together to create the scale ($\alpha = .66$).

The correctional literature discusses the importance of social support in predicting inmate adjustment (Blevins et al., 2010; Jiang & Winfree, 2006; Pollock, Hogan, Lambert, Ross, & Sundt, 2012). In one nationally representative study, Jiang and Winfree (2006) found that while the effect of social support on inmate rule violations can differ between males and females, some social support variables were not gender-specific. To be specific, calls to children or calls received from children were negatively and significantly associated with inmate misconduct. Acknowledging the importance of social support, an index of supportive friends and family was created by recoding and combining three items. The respondents were asked to identify: "the person you most frequently corresponded with through letters in the last year," "the person you most frequently corresponded with through phone in the last year," and "the person you most frequently visited you in the last year." The response options for the three items were nominal. Specifically, the response options included 1 (spouse), 2 (sons/daughters), 3 (parents/brothers/sisters), 4 (fellow inmates), 5 (friends/classmates), 6 (voluntary workers), 7 (other), and 8 (never). To quantify the level of social support, each item was dummy coded. For instance, respondents who had never corresponded with anyone

through letters in the last year were coded as 0 and respondents who had corresponded with someone through letters in the previous year were coded as 1. All three items were recoded and added (range 0-3). Next, an index of supportive fellow inmates was measured by asking the inmates to indicate the number of fellow inmates who can share concern and worry. The response options included 1 (no one), 2 (1 or 2), 3 (3 or 4), and 4 (more than five).

Four types of institutional programs were also included in the statistical analysis since available resources can present inmates with alternative coping strategies other than criminal coping strategy (Baron, 2004; Blevins et al., 2010; Jang & Song, 2015). More specifically, inmates were asked if they had participated in one of four institutional programs during the last twelve months including academic education, vocational training, psychological training, and working in prison. The response options for each item were either 0 (never) or 1 (yes) (Reyns et al., 2016).

[Table 1 here]

## Results

Table 2 provides the zero-order correlations among independent, control and dependent variables. The results show that street code beliefs were significantly related to interpersonal aggression toward fellow inmate and correctional officer in the expected positive direction. However, correlations between independent variable with interpersonal aggression toward fellow inmate ($r = 0.33$) was larger than that with interpersonal aggression toward correctional officers ($r = 0.18$). The table also showed that older inmates and inmates with higher education were less likely to engage in interpersonal aggression toward fellow inmates. Low self-control was correlated with

interpersonal aggression toward both fellow inmates and correctional officers. All criminal justice control variables were correlated with interpersonal aggression toward fellow inmates, but none of them were significant regarding interpersonal aggression toward correctional officers. Experiencing victimization within prison manifested the strongest correlations with both dependent variables. Inmates who had more supportive friends and family were less likely to conduct interpersonal aggression toward fellow inmate, whereas those who had more supportive fellow inmates were less likely to engage in interpersonal aggression toward correctional officers.

[Table 2 here]

Tables 3 and 4 show the results from estimating two models with each form of inmate aggression regressed on street code beliefs, inmate characteristics, criminal justice controls, and prison experiences. The first model includes only street code beliefs. The second model then incorporates individual characteristics of inmates to the baseline model, as well as criminal justice controls. Finally in the final model, prison experiences are entered in addition to the previously mentioned variables. To examine the relationship between independent variables and self-reported interpersonal aggression in a multivariate context, ordinary least-squares (OLS) regression was applied to estimate the models.

Table 3 presents the results of OLS regression of interpersonal aggression toward fellow inmate on street code beliefs in addition to control variables. The results in Model 1 lend support for the first hypothesis regarding the influence of an imported belief system on interpersonal aggression ($b = 0.96$), explaining 10.8% of the total variance of the dependent variable. In Model 2, street code beliefs remained statistically significant

($b$ = 0.088) with added variables like level of education and low self-control also being significantly associated with interpersonal aggression toward fellow inmates. When criminal justice controls were added, some variables became statistically significant. For example, older inmates were less likely to exhibit interpersonal aggression regardless of other factors. One surprising finding was that inmates with high self-esteem tend to express more interpersonal aggression, which appears to support the threatened egoism hypothesis proposed by Baumeister et al. (1996). Model 4 in Table 3 provides the OLS regression estimates of incarceration experiences on interpersonal aggression toward fellow inmates. In this final model, street code beliefs remained as the second strongest correlate (β = 0.17, not shown in the table). Experienced violent victimization demonstrates the greatest magnitude of the standardized regression coefficient (β = 0.34) among all predictors, accounting for 46.14% of the total variance explained by the model. However, none of the remaining newly added variables were statistically significant.

In Table 4, inmate interpersonal aggression toward correctional officers is regressed onto independent variables and control variables. Model 1 shows that street code beliefs were important in predicting the dependent variable ($b$ = 0.025). When other inmate characteristics were included, three of them (age, marital status, and low self-control) manifested statistical significance. Older inmates were prone to avoid interpersonal aggression toward correctional officers similar to our previous models analyzing aggression toward inmates. Low self-control was the second strongest predictor in Model 2 (β = 0.135) after street code beliefs (β = 0.143). Even after criminal justice controls were entered, street code beliefs maintained its statistical significance, suggesting that inmates with higher adherence to the code were more likely to exhibit

interpersonal aggression toward correctional officers. Inmates with a longer length of time served were prone to interpersonal aggression toward correctional officers as well.

In Model 4, when incarceration experiences were considered in addition to previous variables, street code belief became insignificant. In other words, incarceration experiences absorbed the explanatory power of street code beliefs. Notably, experiencing violent victimization was the most critical factor in predicting interpersonal aggression toward correctional officers ($\beta = 0.26$), accounting for 53.7% of the total variance explained by the model. Another notable finding is that inmates with higher informal social support from fellow inmates were less likely to involve in interpersonal aggression toward correctional officers. This finding illuminates correctional literature that emphasizes social support (Colvin, 2007; Jiang & Winfree, 2006) and suggests that inmates may self-select others who share similar belief and value systems.

[Table 3 here]

[Table 4 here]

## Discussion

A large literature has employed proxy measures to measure whether inmates adhere to a criminal belief system before incarceration (Cao et al., 1997; DeLisi et al., 2004; Gover, Mackenzie, & Armstrong, 2000; Tasca et al., 2010). The purpose of the present study was two-fold. First, this study attempted to determine if Anderson's (1999) code of the street can be applied to inmate aggression toward both fellow inmates and correctional officers. Second, this study attempted to examine if adherence to the street code can be a significant predictor of inmate behavior even after controlling key variables

shown to influence said behavior derived from prior studies (Piehl & Useem, 2011; Steiner et al., 2014; Steiner & Wooldredge, 2008).

Upon an examination of the multivariate relationship between key variables on interpersonal aggression toward inmates, the results appear to reinforce Mears et al.'s (2013) assertion that an imported "code of the street" belief system is present in the prison setting and has a significant influence on inmate behavior. Considering a substantial overlap between street and prison codes (Mitchell et al., 2017), it is not hard to reason that inmates abiding by an informal code rooted in respect and power strive to keep their reputation intact by exhibiting oppositional attitudes against conventional norms (Anderson, 1994, 1999). The impact of street code beliefs was particularly strong when explaining interpersonal aggression toward fellow inmates rather than interpersonal aggression toward correctional officers. That said, the code of the street was significantly and positively associated in most of the models of interpersonal aggression toward correctional officers. This finding seems to support Mears et al.'s (2017) argument that adherence to the code of the street is relevant to criminal justice outcomes, such as arrest and conviction.

It is also important to note that experiencing victimization in prison remained one of the strongest predictors of aggression in each step of the models. This is in line with Agnew's (2007) idea that individuals exposed to negative stimuli are more likely to adopt deviant coping strategies as well as Anderson's (1999) work highlighting the necessity for retaliation in settings dominated by the code. Since violent victimization is an especially intense experience, the adverse effect of this experience remains with the victim for a long time (Agnew, 1992); a substantial effect of violent victimization

corresponds with a central proposition of general strain theory. Simultaneously, the strong association between victimization experiences and interpersonal aggression can also be understood through the lens of the code of the street. Anderson (1999) contended that one major reason why residents in disadvantaged neighborhoods adhere to the code of the street is to proactively prevent victimization by removing potential threats. Even though this strategy is commonly employed by code-adherers, recent studies have demonstrated that it is not an effective mechanism to prevent further victimization (Stewart, Schreck, & Simons, 2006).

Lastly, the presence of other supportive inmates was negatively and significantly associated with interpersonal aggression toward correctional officers. This may suggest that when inmates are upset or frustrated, the presence of reliable fellow inmates whom they can share their concern can create social support and reduce the potential risk of inmate misconduct (Sparks et al., 1996). This finding highlights the importance of forming a prison climate that fosters trust between inmates.

Our findings indicate that it is imperative to develop policies and programs that can attenuate or nullify the attraction of oppositional belief systems in prison. One possible way to achieve this objective is to promote trust and legitimacy with prison staff and system, helping to override the pervasive and oppositional subculture among inmates (Jackson, Tyler, Bradford, Taylor, & Shiner, 2010; Liebling & Arnold, 2004). Perceived legitimacy or trust in correctional authority can be enhanced by instituting policies that increase positive experiences with correctional officers (Beijersbergen, Dirkzwager, Eichelsheim, Van der Laan, & Nieuwbeerta, 2015).

There are several limitations of the current study. First, the use of cross-sectional data does not ensure causality between discussed variables. Second, while the current study is premised on an imported belief system, critics may suggest that without the use of longitudinal data it is impossible to fully extrapolate when behaviors were internalized (before or during prison). Third, since the current study relies on the secondary data, some important variables could not be included; gang membership and ranks within a gang for example have shown a strong correlation to inmate aggression and violence in almost every setting (DeLisi et al., 2011; Tasca et al., 2010). That said, the code of the street is not limited to gang members (Anderson, 1999).

The current study extends prior studies in three ways. First, drawing on Mears et al. (2013), the impact of the code of the street in the prison setting is explored with data collected while inmates were still incarcerated. Second, this study presents the utility of the code of the street in different social contexts. Nearly all current research on the impact of the code of the street has focused solely on Western societies. However, if an oppositional value system stems from disadvantaged neighborhood contexts in societies, this unique effect is not necessarily restricted only to minority neighborhoods in the United States, but rather should be observed in any context that fulfills similar requirements laid out by previous researchers (Anderson, 1999; Wilson, 1987). Lastly, the effect of inmate programming is shown as an attenuating factor in the relationship between oppositional subcultures and inmate misconduct in prison. We propose that successful policies and programs designed around this finding are critical in creating a climate that ensures the safety of inmates and correctional officers.

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Table 1.
*Descriptive statistics*

| Variable | M or % | SD | Minimum | Maximum |
|---|---|---|---|---|
| *Dependent variables* | | | | |
| Interpersonal aggression toward fellow inmates (logged) | –0.36 | 0.81 | –1.14 | 2.05 |
| Interpersonal aggression toward correctional officers (logged) | –0.13 | 0.39 | –0.24 | 2.83 |
| *Independent Variable* | | | | |
| Street code beliefs | 8.39 | 2.77 | 4 | 16 |
| *Inmate Characteristics* | | | | |
| Age | 39.07 | 10.16 | 19 | 74 |
| Education | 2.86 | 0.91 | 1 | 5 |
| Marital status (single = 1) | 47.78% | — | 0 | 1 |
| Low self-control | 10.21 | 3.38 | 6 | 24 |
| Self-esteem | 15.19 | 2.91 | 5 | 20 |
| *Criminal Justice Controls* | | | | |
| Convicted of violent offense (violent offense = 1) | 55.62% | — | 0 | 1 |
| Length of time served (logged) | 3.25 | 0.94 | 0.51 | 6.04 |
| Number of times in prison | 1.65 | 2.16 | 0 | 15 |
| *Prison Experiences* | | | | |
| Experienced violent victimization | 1.00 | 1.97 | 0 | 20 |
| Supportive friends and family | 2.43 | 0.70 | 0 | 3 |
| Supportive fellow inmates | 1.95 | 0.85 | 1 | 4 |
| Academic education | 26.38% | — | 0 | 1 |
| Vocational training | 26.14% | — | 0 | 1 |
| Psychological treatment | 12.63% | — | 0 | 1 |
| Work in prison | 63.03% | — | 0 | 1 |

*Note*: $N = 951$.
Abbreviation: M = Mean, SD = standard deviation

Table 2.

*Correlation matrix among independent, control and dependent variables*

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) | – | | | | | | | | | | | | | | | | | |
| (2) | –.04 | – | | | | | | | | | | | | | | | | |
| (3) | .07* | –.09* | – | | | | | | | | | | | | | | | |
| (4) | .03 | –.47* | –.02 | – | | | | | | | | | | | | | | |
| (5) | .28* | –.17* | –.04 | .08* | – | | | | | | | | | | | | | |
| (6) | .01 | –.11* | .21* | –.07* | –.21* | – | | | | | | | | | | | | |
| (7) | .01 | –.07* | –.04 | .10* | .09* | –.04 | – | | | | | | | | | | | |
| (8) | .04 | .09* | .01 | .05 | .10* | –.02 | .49* | – | | | | | | | | | | |
| (9) | .10* | .15* | –.23* | .04 | .07* | –.17* | –.18* | –.10* | – | | | | | | | | | |
| (10) | .34* | .01 | –.02 | .05 | .10* | –.05 | .01 | .05 | .05 | – | | | | | | | | |
| (11) | –.07* | .05 | .08* | –.14* | –.08* | .06 | –.10* | .06 | –.10* | –.09* | – | | | | | | | |
| (12) | –.21* | –.08* | .02 | .02 | –.001 | .14* | .10* | .12* | –.09* | –.11* | .07* | – | | | | | | |
| (13) | .01 | .01 | .10* | .03 | –.01 | .07* | .16* | .31* | –.06 | .01 | .08* | .05 | – | | | | | |
| (14) | .02 | –.02 | –.05 | .08* | .01 | .01 | .13* | .33* | .05 | –.05 | .15* | .06 | .46* | – | | | | |
| (15) | –.01 | –.04 | .02 | .02 | .04 | .02 | .07* | .13* | .01 | .06 | .06 | .04 | .21* | .20* | – | | | |
| (16) | .02 | .05 | –.04 | –.05 | .01 | –.02 | .17* | .23* | –.10* | .08* | .08* | .07* | .07* | .13* | .07* | – | | |
| (17) | .33* | –.07* | –.07* | .04 | .21* | .01 | .08* | .12* | .08* | .42* | –.09* | –.06 | .04 | .01 | .05 | .03 | – | |
| (18) | .18* | –.08* | .004 | –.06 | .18* | –.01 | .01 | .06 | .05 | .28* | –.03 | –.09* | .02 | .03 | .05 | .01 | .35* | – |

*Note 1*: * = $p < .05$ (two-tailed test)

*Note 2*: (1) Street code beliefs, (2) Age, (3) Education, (4) Marital status, (5) Low self-control, (6) Self-esteem, (7) Convicted of violent offense, (8) Length of time served, (9) Number of times in prison, (10) Experienced violent victimization, (11) Supportive friends and family, (12) Supportive fellow inmates, (13) Academic education, (14) Vocational training, (15) Psychological treatment, (16) Work in prison, (17) Interpersonal aggression toward fellow inmates, and (18) Interpersonal aggression toward correctional officers

Table 3.
*Determinants of interpersonal aggression toward fellow inmates*

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
|---|---|---|---|---|---|---|---|---|
| | *b* | (*SE*) | *b* | (*SE*) | *b* | (*SE*) | *b* | (*SE*) |
| *Independent Variable* | | | | | | | | |
| Street code beliefs | .096*** | .010 | .088*** | .010 | .086*** | .010 | .051*** | .010 |
| *Inmate Characteristics* | | | | | | | | |
| Age | — | — | –.003 | .003 | –.005* | .003 | –.006* | .003 |
| Education | — | — | –.093** | .030 | –.084** | .030 | –.076** | .029 |
| Marital status (single = 1) | — | — | .011 | .060 | –.021 | .060 | –.058 | .057 |
| Low self-control | — | — | .029** | .008 | .025** | .008 | .025** | .008 |
| Self-esteem | — | — | .013 | .010 | .014* | .010 | .018* | .009 |
| *Criminal Justice Controls* | | | | | | | | |
| Convicted of violent offense (violent offense = 1) | — | — | — | — | .060 | .061 | .059 | .059 |
| Length of time served (logged) | — | — | — | — | .076* | .032 | .071* | .033 |
| Number of times in prison | — | — | — | — | .022 | .013 | .022 | .012 |
| *Prison Experiences* | | | | | | | | |
| Experienced violent victimization | — | — | — | — | — | — | .140*** | .013 |
| Supportive friends and family | — | — | — | — | — | — | –.035 | .037 |
| Supportive fellow inmates | — | — | — | — | — | — | –.004 | .030 |
| Academic education | — | — | — | — | — | — | .038 | .065 |
| Vocational training | — | — | — | — | — | — | –.030 | .067 |
| Psychological treatment | — | — | — | — | — | — | .021 | .076 |
| Work in prison | — | — | — | — | — | — | –.020 | .053 |
| $R^2$ | .108 | | .134 | | .147 | | .252 | |

*Notes*. $N = 951$. SE = standard error.
*$p < .05$. **$p < .01$. ***$p < .001$. (two-tailed tests).

Table 4.
*Determinants of interpersonal aggression toward correctional officers*

| | Model 1 | | Model 2 | | Model 3 | | Model 4 | |
|---|---|---|---|---|---|---|---|---|
| | *b* | (*SE*) | *b* | (*SE*) | *b* | (*SE*) | *b* | (*SE*) |
| *Independent Variable* | | | | | | | | |
| Street code beliefs | .025*** | .005 | .020*** | .005 | .019*** | .005 | .004 | .005 |
| *Inmate Characteristics* | | | | | | | | |
| Age | — | — | –.004** | .001 | –.005** | .002 | –.006*** | .001 |
| Education | — | — | –.006 | .015 | –.002 | .015 | .002 | .015 |
| Marital status (single = 1) | — | — | –.100** | .030 | –.112*** | .030 | –.126*** | .029 |
| Low self-control | — | — | .016*** | .004 | .014** | .004 | .015*** | .004 |
| Self-esteem | — | — | .000 | .005 | 0.00 | .005 | .003 | .005 |
| *Criminal Justice Controls* | | | | | | | | |
| Convicted of violent offense (violent offense = 1) | — | — | — | — | –.023 | .031 | –.018 | .030 |
| Length of time served (logged) | — | — | — | — | .035* | .016 | .030 | .017 |
| Number of times in prison | — | — | — | — | .011 | .006 | .010 | .006 |
| *Prison Experiences* | | | | | | | | |
| Experienced violent victimization | — | — | — | — | — | — | .051*** | .007 |
| Supportive friends and family | — | — | — | — | — | — | –.009 | .019 |
| Supportive fellow inmates | — | — | — | — | — | — | –.031* | .015 |
| Academic education | — | — | — | — | — | — | –.003 | .033 |
| Vocational training | — | — | — | — | — | — | .032 | .034 |
| Psychological treatment | — | — | — | — | — | — | .025 | .039 |
| Work in prison | — | — | — | — | — | — | –.014 | .027 |
| $R^2$ | .033 | | .061 | | .075 | | .140 | |

*Note*. $N = 951$. SE = standard error.
*$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).